

WHAT IS CLAIMED IS:

1. A method for increasing system performance of a satellite communication system, said satellite communication system including a satellite having an antenna, said antenna having an electrical boresight, the method comprising:

analyzing the performance of said satellite communication system to determine an optimal electrical boresight pointing location for the electrical boresight of said antenna; and
pointing the electrical boresight of said antenna at said optimal boresight pointing location.

2. The method of claim 1, wherein said analyzing step includes determining the electrical boresight pointing that minimizes the Co-Channel Interference (CCI) of said satellite communication system.

3. The method of claim 1, wherein said antenna directs a plurality of spot beams and said spot beams are arranged into at least one high density area, wherein said analyzing step includes determining the electrical boresight pointing by generally centering said electrical boresight on said high density area.

4. The method of claim 1, wherein said analyzing step includes determining at least one of bit error rate (BER) and noise floor for the satellite communication system and determining the electrical boresight pointing that minimizes at least one of the BER and noise floor for said satellite communication system.

5. The method of claim 1, further including:

reanalyzing the performance of said satellite communication system to determine a new optimal electrical boresight pointing location for the electrical boresight of said antenna.
6. The method of claim 5 wherein said reanalyzing step is performed at a network control center.
7. A system for increasing the performance of a satellite communication system, said system including:

a satellite having an antenna,

said antenna having an electrical boresight, said electrical boresight pointing at an optimal boresight pointing location, said optimal boresight pointing location determined by analyzing the performance of said satellite communication system.
8. The system of claim 7, wherein said optimal boresight pointing location is determined by determining the electrical boresight pointing that minimizes the Co-Channel Interference (CCI) of said satellite communication system.
9. The system of claim 7, wherein said antenna directs a plurality of spot beams and said spot beams are arranged into at least one high density area, and said optimal boresight pointing location is determined by determining the electrical boresight pointing by generally centering said electrical boresight on said high density area.

10. The system of claim 7, wherein said optimal boresight pointing location is determined by determining at least one of bit error rate (BER) and noise floor for the satellite communication system and determining the electrical boresight pointing that minimizes at least one of the BER and noise floor for said satellite communication system.

11. The system of claim 7, wherein the performance of said satellite communication system is reanalyzed to determine a new optimal electrical boresight pointing location for the electrical boresight of said antenna.

12. The system of claim 11, further including a network control center for reanalyzing the performance of said satellite communication system.

13. A satellite-based antenna of a satellite communication system, said antenna including:
an electrical boresight, said electrical boresight pointing at an optimal boresight pointing location, said optimal boresight pointing location determined by analyzing the performance of said satellite communication system.

14. The antenna of claim 13, wherein said optimal boresight pointing location is determined by determining the electrical boresight pointing that minimizes the Co-Channel Interference (CCI) for said satellite communication system.

15. The antenna of claim 13 wherein said antenna directs a plurality of spot beams and said spot beams are arranged into at least one high density area, and said optimal boresight pointing location is determined by determining the electrical boresight pointing by generally centering said electrical boresight on said high density area.

16. The antenna of claim 13, wherein said optimal boresight pointing location is determined by determining at least one of bit error rate (BER) and noise floor for the satellite communication system and determining the electrical boresight pointing that minimizes at least one of BER and noise floor of said satellite communication system.

17. The antenna of claim 13, wherein the performance of said satellite communication system is reanalyzed to determine a new optimal electrical boresight pointing location for the electrical boresight of said antenna.

18. The antenna of claim 17 further including a network control center for reanalyzing the performance of said satellite communication system.